## **EAST Search History**

## EAST Search History (Prior Art)

| Ref# | Hits    | Search Query   | DBs   | Default<br>Operator | Plurals | Time Stamp          |
|------|---------|--|---|---------------------|---------|---------------------|
| S3   | 2992    | (shift   raise   lower )<br>near (band! adj gap  <br>bandgap)                | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/05/31<br>17:25 |
| S4   | 5       | S 8 83   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/05/31<br>17:25 |
| S5   | 2       | us-20070160099-\$.did.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/05/31<br>17:29 |
| S6   | 4       | (bandgap   band adj<br>gap) near10<br>(cumulative   additive)<br>near3 shift | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/05/31<br>17:48 |
| S7   | 4       | ("5071786"  <br>"6027989").PN.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/06/10<br>09:56 |
| S8   | 2       | ("5395793").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/06/10<br>09:56 |
| S9   | 1212626 | silicon adj dioxide  <br>"sio.sub.2"   silica!  <br>silicon adj oxide        | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2010/06/10<br>10:02 |

| S10 | 35465 | impurity near6 (sulphur<br>  zinc   fluorine  <br>copper   germanium  <br>tin   selenium)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>10:03 |
|-----|-------|---|---|-----|----|---------------------|
| S11 | 591   | S9 near8 S10  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>10:05 |
| S12 | 2998  | (shift   raise   lower )<br>near (band! adj gap  <br>bandgap)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>10:05 |
| S13 | 13    | S11 & (S12   quantum<br>adj well)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>10:05 |
| S14 | 25    | ("20040038503"   "20080069169"   "4148045"   "4829347"     "4875216"   "5283448"     "5527322"   "5071786"   "5395793"     "6309904"   "7223623").FN. | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DEFWENT;<br>IBM_TDB | AND | ON | 2010/06/10 10:08    |
| S15 | 6     | S7   S8   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>10:10 |
| S16 | 1     | kr-2001036949-\$.did.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>12:20 |
| S18 | 3     | dielectric adj cap adj2<br>quantum adj well adj<br>disordering   DOQWD.<br>u/c.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>13:13 |

| S19         | 67   | impurity adj free adj<br>vacancy adj diffusion  <br>ifvd.u/c.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>13:14 |
|-------------|------|---|---|-----|----|---------------------|
| S20         | 3    | S18 & S19   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:32 |
| S22         | 1058 | quantum adj well near<br>(intermixing   enhanc<br>\$4   tun\$4   disorder\$4<br>  band adj gap )                                | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:39 |
| S23         | 1061 | quantum adj well near<br>(intermixing   enhanc<br>\$4   tun\$4   disorder\$4<br>  band adj gap  <br>multiple adj<br>wavelength) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:40 |
| S24         | 485  | S23 & (anneal  <br>thermal )  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:41 |
| S26         | 1090 | quantum adj well near<br>(intermix\$4   enhanc\$4<br>  tun\$4   disorder\$4  <br>multiple adj<br>wavelength   band adj<br>gap)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:42 |
| <b>S</b> 27 | 489  | S26 & (anneal  <br>thermal)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:42 |
| S28         | 23   | \$26 & (second  <br>additional   multiple)<br>near2 (anneal  <br>thermal)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:43 |

| \$29        | 562   | S26 & (anneal\$3  <br>thermal)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:45 |
|-------------|-------|--|---|-----|----|---------------------|
| S30         | 44    | \$26 & (second  <br>additional   multiple)<br>near2 (anneal\$3  <br>thermal)                               | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/10<br>14:45 |
| S31         | 54    | method near3<br>researching.clm.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/15<br>17:52 |
| S32         | 6     | (multiple  <br>cummulative   additive<br>  suc\$1es\$1ive) near3<br>(bandgap   band! adj<br>gap) adj shift | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/16<br>14:06 |
| S33         | 5     | S32 & (symmetric  <br>asymmetric)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/16<br>14:07 |
| S34         | 32    | (multiple  <br>cummulative   additive<br>  suc\$1es\$1ive) same<br>(bandgap   band! adj<br>gap) adj shift  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/16<br>14:08 |
| <b>S3</b> 5 | 2     | (symmetric  <br>asymmetric) with<br>(bandgap   band! adj<br>gap) adj shift                                 | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/16<br>14:08 |
| S36         | 72652 | bandgap   band! adj<br>gap   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/16<br>14:09 |

| <b>S</b> 37 | 817  | S36 near4 (shift)  | US-PGPUB;<br>USPAT; USOOR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND |      | 2010/06/16<br>14:09 |
|-------------|------|--|---|-----|------|---------------------|
| S38         | 236  | S37 & (symmetric  <br>symmetry  <br>asymmetric  <br>asymmetry) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/16<br>14:10 |
| S39         | 83   | S38 & second near6<br>S36                                      | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/16<br>14:10 |
| S40         | 1028 | 438/47.ccls.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/16<br>16:06 |
| S41         | 428  | S40 & @py<"2004"   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/16<br>16:06 |
| S42         | 600  | S40 not S41  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | "FON | 2010/06/16<br>16:06 |
| S43         | 153  | ((JOHN) near2<br>(MARSH)).INV.                                 | US-PGPUB;<br>USPAT  | AND | ON   | 2010/06/16<br>16:08 |
| S44         | 3    | ((DAN) near2<br>(YANSON)).INV.                                 | US-PGPUB;<br>USPAT  | AND | ON   | 2010/06/16<br>16:09 |
| <b>S</b> 45 | 10   | ((STEWART) near2<br>(MCDOUGALL)).INV.                          | US-PGPUB;<br>USPAT; USOCR   | AND | ON   | 2010/06/16<br>16:09 |
| <b>S</b> 46 | 4667 | multi adj quantum adj<br>well                                  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/17<br>11:55 |

| S47 | 3    | S46 near5 pixel                               | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>11:55 |
|-----|------|---|---|-----|----|---------------------|
| S49 | 114  | vertical adj cavity & photonic adj components | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>11:58 |
| S50 | 16   | S49 & pixel                                   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>11:59 |
| S51 | 0    | pixel same encapsulant<br>adj between         | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>12:01 |
| S52 | 0    | pixel same encapsulant<br>near2 adjacent      | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>12:01 |
| S53 | 308  | encapsulant near2<br>adjacent                 | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>12:01 |
| S54 | 6059 | separat\$3 adj pixels                         | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>12:01 |
| S55 | 361  | separat\$3 adj adjacent<br>adj pixels         | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM TDB | AND | ON | 2010/06/17<br>12:01 |

| S56 | 401  | light adj emitting &<br>ingaas & multiple adj<br>wavelengths               | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ************************************** | 2010/06/17<br>13:24 |
|-----|------|--|---|-----|--|---------------------|
| S57 | 172  | S56 & quantum adj<br>well  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>13:24 |
| S58 | 16   | S57 & third adj region   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>13:25 |
| S59 | 1    | "7,739,139".pn.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>13:33 |
| S60 | 1290 | sputter near3 (silicon<br>adj (dioxide   oxide)  <br>silica   "sio.sub.2") | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>15:18 |
| S61 | 18   | S60 & quantum adj<br>well & light adj emitt\$4                             | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>15:18 |
| S62 | 1913 | lift adj off & quantum<br>adj well & light adj<br>emitt\$4                 | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>15:27 |
| S63 | 564  | S62 & photoresist  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON                                     | 2010/06/17<br>15:27 |

| S64 | 2546  | photoresist near8 lift<br>adj off  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND |  | 2010/06/17<br>15:30 |
|-----|-------|--|---|-----|--|---------------------|
| S65 | 24399 | pattern\$4 near4 ("sio.<br>sub.2"   silicon adj<br>(dioxide   oxide)  <br>silica)                      | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ····ON   | 2010/06/17<br>15:31 |
| S66 | 35    | S64 same S65   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | STATE OF THE PROPERTY OF THE P | 2010/06/17<br>15:31 |
| S67 | 3774  | etch\$3 near8 lift adj off   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/17<br>15:35 |
| S68 | 216   | \$67 near7 (alternativ\$3<br>  either)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/17<br>15:35 |
| S69 | 3032  | pattern\$4 near4 ("sio.<br>sub.2"   silicon adj<br>(dioxide   oxide)  <br>silica) near8<br>photoresist | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/17<br>15:41 |
| S70 | 6     | S69 near8 lift adj off   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/17<br>15:41 |
| S71 | 134   | encapsulating near5<br>pixels  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON   | 2010/06/17<br>15:52 |

|  | 37 | adjacent adj pixels<br>near3 insulated | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2010/06/17<br>16:00 |  |
|--|----|--|---|-----|----|---------------------|--|
|--|----|--|---|-----|----|---------------------|--|

## EAST Search History (Interference)

- <This search history is empty>
- 6/17/2010 4:51:57 PM
- C:\ Documents and Settings\ aparker2\ My Documents\ EAST\ Workspaces\ 10596327.wsp